Postal Regulatory Commission
Submitted 12/11/2014 2:09:24 PM
Filing ID: 90869
Accepted 12/11/2014

BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268–0001

PERIODIC REPORTING (PROPOSAL THIRTEEN)	Docket No. RM2015-7

PETITION OF THE UNITED STATES POSTAL SERVICE FOR THE INITIATION OF A PROCEEDING TO CONSIDER PROPOSED CHANGE IN ANALYTICAL PRINCIPLES (PROPOSAL THIRTEEN)
(December 11, 2014)

Pursuant to 39 C.F.R. § 3050.11, the Postal Service requests that the Commission initiate a rulemaking proceeding to consider a proposal to change analytical principles relating to the Postal Service's periodic reports. The proposal, labeled Proposal Thirteen, is summarized in the attached text. A more comprehensive discussion can be found in the accompanying Report. The Report is provided as part of USPS-RM2015-7/1, but, for convenience, a copy is also attached to this document electronically as a pdf file.

The Postal Service fully appreciates that Proposal Thirteen, regarding comprehensive updates to the variabilities and cost pools used for city carrier street time, represents a much more substantial undertaking than often encountered in these types of proceedings. (Indeed, it encompasses a subject which has been extensively discussed as part of the Strategic Rulemaking, Docket No. RM2011-3, and therefore, a separate notice will be simultaneously filed today in the Strategic Rulemaking, alerting participants in that docket that Proposal Thirteen has been presented in this case.) While recognizing that it will take time for the Commission and interested parties to review and digest the extensive materials presented, the Postal Service is submitting

this proposal now to get the process started. Although the upcoming weeks and months will be busy with Annual Compliance Report activities, it is nonetheless hoped that, during this time, parties can begin to familiarize themselves with the proposal. Once the ACR process is completed, perhaps the review process for this proposal can then move into a more active phase. The Postal Service's objective is to have the rulemaking completed in sufficient time so that the outcome of the review of Proposal Thirteen can become the basis for FY15 ACR reporting of city carrier street time costs.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorney:

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Eric P. Koetting

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260-1137
(202) 277-6333
December 11, 2014

PROPOSAL 13: Updating the City Carrier Street Time Cost Model

Objective:

The objective of this proposal is to update the city carrier street time model used to determine the attributable street time costs in Cost Segment 7.

Background:

The city carrier network is the largest part of the Postal Service's delivery network, incurring a total direct labor cost in Fiscal Year 2013 of almost $16 billion, of which over $12 billion were in street time costs. These city carrier street time costs represented 16.7 percent of total Postal Service costs.

The current development of attributable city carrier street time costs uses a model that was calibrated with data collected in 2002. Since that time there have been a number of important changes to city carrier delivery. These changes include the widespread adoption of the delivery point sequencing (DPS) of letters, dramatic changes in the volumes of mail delivered, restructuring of the city carrier network, and the introduction of the flats sequencing system (FSS). Because of the importance of city carrier street costs and the number of operational changes that have occurred, the Postal Service initiated a comprehensive study of city carrier street time activities and costs which has been used to update the existing city carrier street time model and refine the calculation of the resulting attributable costs.

Proposal:

Introduction

The Postal Service proposes to update and improve the city carrier street time model. This will be accomplished through updating and refining the three main components of the model: construction of the cost pools, estimation of regular delivery variabilities and estimation of package and accountable delivery variabilities. In addition, improvements in the Postal Service's city carrier operational data systems have made it possible for the Postal Service to use these systems to produce data needed for the update. This improvement allows all three parts of the model to be based upon larger, more stable, data sets and improved the statistical foundation for calculating attributable street time costs.

There were two instances in which the Postal Service's city carrier data systems did not fully capture the information needed to calculate attributable street time costs. In those two instances, (1) measuring the volume of mail collected from customers and (2) measuring package and accountable delivery times and volumes, the Postal Service augmented its use of operational data with field studies. Because these field studies could be carefully targeted, the resulting data samples were twice the size of the samples used in previous city carrier field studies.

Updating the Cost Pools

Cost pools reflect the activities that city carriers perform on the street, such as driving to the route or delivering packages, and capture the costs that are created by the performance of these activities. Because cost pools are formed by multiplying accrued

street time cost by the national proportions of time spent in each street activity, constructing the cost pools requires identifying the proportions of city carrier street time that are spent in the those activities.

In the past, the time proportions were derived from expensive special studies that required collection of field data on all carrier activities. The Postal Service proposes replacing those studies with data taken from its city carrier route evaluation system. This approach has several advantages. First, the route evaluation system covers virtually all city carrier routes in the country, so the data set will be comprehensive. Second, because the data are based upon actual operational practice, the resulting time proportions reflect the operational reality of street time activity. Third, because the data can be extracted from an ongoing data system, its production does not require an expensive special study, and the street time proportions can be updated on a timely basis. Fourth, because they can be updated regularly, time proportions based upon the route evaluation data automatically reflect network and operational changes.

The route evaluation data system consists of one observation for each city carrier route in the country. A route evaluation is a process in which the Postal Service collects data on the times the carrier spends in the various office and street activities on a route. An extract was taken from the route evaluation system and it contains route evaluations for the approximately 140,000 city carrier routes. The data in this extract were carefully evaluated for consistency and stability, and were found to provide a reliable basis for calculating national street time proportions. The resulting set of proportions used to calculate the cost pools is presented in Table 1.

Table 1 Street Time Proportions Used to Calculate Cost Pools

Street Activity	**Time Proportion**
Regular Delivery	78.22%
In-Receptacle Package Delivery	4.40%
Deviation Delivery	5.39%
Collection from Street Letter Boxes	0.20%
Travel To and From	5.03%
Relay	3.82%
Network Travel	2.93%
Total	100.0%

Updating Regular Delivery Time Variabilities

Regular delivery time makes up the bulk of a city carrier's street time and is the largest cost pool in the street time cost model. It includes primary delivery activities like driving along the route within delivery sections, accessing stops (whether on foot or in a vehicle), putting letters and flats into customers' mail receptacles, and retrieving collection mail from those receptacles.

Regular delivery time is caused both by the volumes that are delivered and by the need to cover the network of delivery points. Consequently, the cost drivers of regular delivery time are the volumes, delivered and collected, and the number of delivery points in the network. The volume cost drivers reflect the bundle structure currently used in city carrier delivery, and include all city carrier delivered letters and

flats. There are separate volume bundles, and thus separate cost drivers, for DPS mail, cased mail, sequenced mail, FSS mail, and mail collected from customers. Note that cased mail includes both letters and flats, which are cased together and pulled down into one bundle or container.

The Postal Service manages its city carrier network by ZIP Code. The total hours required for a ZIP Code's delivery function are caused by the ZIP Code's volumes and the number of delivery points included in the ZIP Code. While carrier routes are an important organizing structure for the Postal Service, management decisions are made at the ZIP Code level. This is highlighted by the widespread use of pivoting routes. To accurately capture the relationship between delivery time and volume, the regular delivery variabilities were estimated on ZIP Code level data.

Delivered volumes are collected for each ZIP Code, on a daily basis, in the Postal Service's Delivery Operations Information System (DOIS). But that system does not measure volumes collected from customers, and field study was thus required to complete the vector of volume cost drivers.

The collection volume study had city carriers record their collection volumes, by source and shape, for twelve consecutive delivery days. A sample size of 300 ZIP Codes was determined to be the largest sample consistent with Postal Service budgetary and management resources. This size is approximately double the sample sizes of previous city carrier studies.[1] Three of the sample ZIP Codes could not participate due to administrative conflicts during the study period, so 297 ZIP

[1] DOIS data for the delivered volumes were extracted for the same ZIP Codes and days to ensure production of a consistent set of data to estimate the regular delivery variabilities.

participated. This implies a possible data set of 3,564 ZIP Code days. The collection volume study produced 3,513 ZIP Code days of data or 98.6 percent of the possible observations. Because DOIS produces data for all ZIP Code days, the analysis dataset has complete coverage, in the sense that data from all routes are included in each ZIP Code's volume data.

The regular delivery time variabilities are estimated with a quadratic model including the volume cost drivers, the number of delivery points, and three variables that capture variations in the delivery environment. Because it employs a larger data set with complete ZIP Code day observations, the current regular delivery time equation has improved econometric properties relative to previous versions. Multicollinearity was reduced and the estimated coefficients and variabilities were found to be stable across reasonable alternative specifications. The updated variabilities are presented in Table 2.

Table 2
Updated Regular Delivery Variabilities

Cost Driver	Variability	Marginal Time (Seconds)
DPS	16.8%	2.07
Cased Mail	7.0%	2.79
Sequenced	3.4%	2.61
FSS	3.0%	5.21
Collection	5.4%	5.75

Updating Package and Accountable Delivery Time Variabilities

Regular delivery time covers the delivery of letters and flats throughout the Postal Service's network of city carrier letter routes. It does not include the time required for delivering packages and accountables, which is included in the package and accountable delivery cost pool.

There are three separate delivery activities included in total package and accountable delivery time: (1) the delivery of packages which fit into the mail receptacle, (2) the delivery of packages that require a carrier deviation or change in the regular delivery procedures, and (3) the delivery of accountables which require a signature or customer contact.[2] As with regular delivery, the cost drivers of package and accountable delivery are the volumes delivered and the number of delivery points to be covered.

In-receptacle packages are delivered in the same receptacle as letters and flats, and are delivered in the course of the carrier's regular line of travel, using regular delivery procedures. The actions required to deliver in-receptacle packages are not related to the actions required to deliver deviation packages and accountables. It is appropriate, therefore, to specify separate equations and estimate separate variabilities for in-receptacle package deliveries and deviation package and accountable deliveries.

Investigation of Postal Service data systems revealed that its operational databases do not include complete data on package and accountable delivery times

[2] Packages that are also accountables are treated as accountables.

and volumes. Therefore, a special field study was required to collect the data needed for estimating package and accountable variabilities.

The sample for the package and accountable field study was the same 300 ZIP Codes that were included in the collection volume study, and were thus used as the basis for the regular delivery variabilities. The package and accountable field study required city carriers to both record their package and accountable volumes and to use their scanners to record their package and accountable delivery times. Carriers were asked to record this information for twelve consecutive days. Of the 300 ZIP Codes in the original sample, 289 were able to participate in the package and accountable study and 282 were able to provide both scan and volume data for at least one week.

The package and accountable delivery time variabilities were estimated with quadratic models that included the volume cost drivers, the number of delivery points, and variables that capture variations in the delivery environment. The updated variabilities are presented in Table 3.

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Table 3

Estimated Package and Accountable Variabilities

Shape	**Variability**
In Receptacle Package	48.8%
Deviation Package	31.1%
Accountable	18.0%

Impact:

To assess the impact of the new study, the new cost pools and variabilities were embedded in the FY 2013 city carrier street time model as constructed in the Cost Segment 6 and 7 (CS06&7) spreadsheets. The volume variable costs were then recalculated and compared with the volume variable cost produced by the original model.

First the impact of the study on total Cost Segment 7 volume variable costs was assessed. Table 4 shows that the overall impact of the study was a very modest decline in volume variable costs. The average variability for the cost segment falls slightly from 48.5 percent to 47.3 percent.

Table 4

Impact of the New Study on Cost Segment 7 Volume Variable Costs

Category	FY 2013 With New Study	FY2013 CRA	Difference
Total Volume Variable Costs	$7,396,300	$7,585,485	($189,185)
Other Costs	$8,237,378	$8,048,193	$189,185
Accrued Costs	$15,633,678	$15,633,678	$0
Average Variability	47.3%	48.5%	-1.2%

While the study did not cause much change in overall volume variable costs, there were changes in attributable costs across products. These changes were entirely consistent with a decline in First-Class Mail relative to Standard Mail, and increases in both sequenced mail volume and package volume. Table 5 presents the impact, by

product, of the updated city carrier street time cost model on overall attributable costs per piece. A breakout of the impact on competitive products is provided under seal in USPS-RM2015-7/NP1.

Table 5
Changes In Costs Per RPW Piece

	FY 2013 CRA With New Study	FY 2013 CRA	Difference
FIRST-CLASS MAIL			
SINGLE-PIECE LETTERS	$0.259	$0.275	-$0.016
SINGLE-PIECE CARDS	$0.261	$0.278	-$0.016
PRESORT LETTERS	$0.116	$0.119	-$0.002
PRESORT CARDS	$0.079	$0.081	-$0.002
FLATS	$0.878	$0.890	-$0.011
PARCELS	$2.400	$2.361	$0.040
STANDARD MAIL			
HIGH DENSITY & SATURATION LETTERS	$0.063	$0.060	$0.003
HIGH DENSITY & SATURATION FLATS & PARCELS	$0.095	$0.074	$0.021
EVERY DOOR DIRECT MAIL - RETAIL	$0.058	$0.039	$0.018
CARRIER ROUTE	$0.196	$0.187	$0.009
LETTERS	$0.102	$0.105	-$0.003
FLATS	$0.459	$0.452	$0.008
PARCELS	$1.586	$1.524	$0.062
PERIODICALS			
IN COUNTY	$0.150	$0.144	$0.006
OUTSIDE COUNTY	$0.369	$0.363	$0.006
PACKAGE SERVICES			
BOUND PRINTED MATTER FLATS	$0.566	$0.568	-$0.002
BOUND PRINTED MATTER PARCELS	$1.238	$1.216	$0.022
MEDIA AND LIBRARY MAIL	$3.967	$3.940	$0.027
Ancillary Services			
CERTIFIED	$2.149	$2.288	-$0.138
COD	$7.348	$7.609	-$0.261
INSURANCE	$2.612	$2.699	-$0.086
REGISTRY	$12.395	$12.500	-$0.105